

# APS SEARCH: 08/336,335

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=> s 82/clas or 364/clas or 409/clas or 451/clas
    14911 82/CLAS
    57815 364/CLAS
    16207 409/CLAS
    41701 451/CLAS
L1  124962 82/CLAS OR 364/CLAS OR 409/CLAS OR 451/CLAS

=> s l1 and (lath? or turn?)
    12628 LATH?
    821890 TURN?
L2  38253 L1 AND (LATH? OR TURN?)

=> s l2 and (reciproc? or oscilat? or vibrat? or frequenc?)(3a)(tool? or work?)
    147950 RECIPROC?
    752 OSCILAT?
    138755 VIBRAT?
    297047 FREQUENC?
    181990 TOOL?
    531227 WORK?
    10475 (RECIPROC? OR OSCILAT? OR VIBRAT? OR
FREQUENC?)(3A)(TOOL? O
R W
    ORK?)
L3  1090 L2 AND (RECIPROC? OR OSCILAT? OR VIBRAT? OR
FREQUENC?)(3A)(
TOO
    L? OR WORK?)

=> s l3 and cut?
    535537 CUT?
L4  775 L3 AND CUT?

=> s l4 and (sin?(2a)(wave or curve)
UNMATCHED LEFT PARENTHESIS 'AND (SIN?'

=> s l4 and (sin?(2a)(wave or curve))
TERM 'SIN?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED

=> s l4 and (wave or curve or harmonic)
    157739 WAVE
    166500 CURVE
    18355 HARMONIC
L5  206 L4 AND (WAVE OR CURVE OR HARMONIC)

=> s l5 and (computer or control)
    146734 COMPUTER
    872360 CONTROL
L6  175 L5 AND (COMPUTER OR CONTROL)

=> d 1-175

1. 5,453,931, Sep. 26, 1995, Navigating robot with reference line
plotter; James R. Watts, Jr., **364/424.02**; 180/8.5, 168; 395/80 [IMAGE
AVAILABLE]

2. 5,447,463, Sep. 5, 1995, Apparatus for microfinishing; Heinz G.
Schmitz, **451/14**; **10**; **49**; **172** [IMAGE AVAILABLE]

3. 5,418,731, May 23, 1995, Numerical **control** unit for non-circular
workpiece fabricating machine; Tatsuhiro Yoshimura, et al.,
**364/474.31**; 318/573; **364/474.06** [IMAGE AVAILABLE]

4. 5,406,494, Apr. 11, 1995, Numerical **control** system with operator
controlled **cutting**; Todd J. Schuett, **364/474.3**; 318/569;
**364/474.28** [IMAGE AVAILABLE]

5. 5,402,354, Mar. 28, 1995, **Control** apparatus and **control**
method for machine tools using fuzzy reasoning; Fumito Okino, et al.,
**364/474.16**; **474.06**; 395/904; **451/5** [IMAGE AVAILABLE]

6. 5,396,434, Mar. 7, 1995, Machining-error correcting method used for a
non-circular shape machining apparatus; Hiroshi Oyama, et al.,
**364/474.35**; 318/570, 573; **364/474.31** [IMAGE AVAILABLE]

7. 5,390,408, Feb. 21, 1995, Slotting; Arthur E. Bishop, et al., 29/558,
890.132; **409/244**; **293** [IMAGE AVAILABLE]

8. 5,357,439, Oct. 18, 1994, Custom-made manufacturing system and
custom-made manufacturing method; Kichie Matsuzaki, et al., **364/468**;
**188** [IMAGE AVAILABLE]

9. 5,348,008, Sep. 20, 1994, Cardiorespiratory alert system; Robert
Bornn, et al., 128/642, 644, 671, 696, 710, 903, 904; **364/413.02**
[IMAGE AVAILABLE]
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10. 5,347,763, Sep. 20, 1994, Polishing apparatus; Masahiko Miyamoto, et
al., **451/241**; **36** [IMAGE AVAILABLE]

11. 5,336,024, Aug. 9, 1994, Precision drilling method; Teruo Nakagawa,
et al., 408/1R; **364/474.16**; **474.19**; 408/8, 13 [IMAGE AVAILABLE]

12. RE 34,663, Jul. 19, 1994, Non-invasive determination of mechanical
characteristics in the body; Joseph B. Seale, 128/774, 649, 677;
**364/508** [IMAGE AVAILABLE]

13. 5,323,324, Jun. 21, 1994, Yarn tension **control** system;
Lars-Berno Fredriksson, **364/470**; 139/452; **364/138** [IMAGE
AVAILABLE]

14. 5,321,350, Jun. 14, 1994, Fundamental frequency and period detector;
Peter Haas, 324/76.11; **364/484** [IMAGE AVAILABLE]

15. 5,317,943, Jun. 7, 1994, Method and apparatus for ultrasonically
**cutting** mat board; Barton K. Dowdle, 83/56, 100, 577; **409/132**
[IMAGE AVAILABLE]

16. 5,305,556, Apr. 26, 1994, Method and apparatus for shaping the
interior surfaces of bores; Oswald Kopp, et al., **451/165**; **27**;
**124** [IMAGE AVAILABLE]

17. 5,289,660, Mar. 1, 1994, Method and apparatus for grinding
non-circular workpiece; Fumitoshi Terasaki, et al., **451/49**; **5**;
**228** [IMAGE AVAILABLE]

18. 5,287,280, Feb. 15, 1994, Method and apparatus for controlling shoe
slip of crawler vehicle; Shigeru Yamamoto, et al., **364/426.03**;
180/197; **364/424.07** [IMAGE AVAILABLE]

19. 5,251,151, Oct. 5, 1993, Method and apparatus for diagnosing the
state of a machine; Victor Demjanenko, et al., **364/550**; **508**;
**551.02** [IMAGE AVAILABLE]

20. 5,245,793, Sep. 21, 1993, Method and apparatus for fine working or
microfinishing; Heinz G. Schmitz, **451/49**; **14** [IMAGE AVAILABLE]

21. 5,239,978, Aug. 31, 1993, Oscillatory abrasive cable power saw; Gus
F. Plangetis, 125/16.01; 83/651.1; 125/19; **451/356**; **454** [IMAGE
AVAILABLE]

22. 5,187,669, Feb. 16, 1993, Programmable surface sensor for machining
rough stock; Douglas G. Wildes, et al., **364/474.17**; **474.16** [IMAGE
AVAILABLE]

23. 5,186,695, Feb. 16, 1993, Apparatus for controlled exercise and
diagnosis of human performance; Glen Mangseth, et al., 482/6; 73/379.06;
**364/413.02**; 434/247; 482/4, 51, 900, 902, 903; 601/26, 33 [IMAGE
AVAILABLE]

24. 5,165,205, Nov. 24, 1992, Device for vibrating materials to be
ground; Takeo Nakagawa, et al., **451/392**; 366/108, 111; **451/272**
[IMAGE AVAILABLE]

25. 5,148,372, Sep. 15, 1992, Interactive graphic system for the
mathematical representation of physical models; Roberto Maiocco, et al.,
**364/474.24**; **474.37**; **551.02** [IMAGE AVAILABLE]

26. 5,144,773, Sep. 8, 1992, Honing or grinding tool and measuring
device for measuring wear; Gerhard Flores, et al., **451/8**; 73/104;
407/119; **451/540**; **544** [IMAGE AVAILABLE]

27. 5,125,188, Jun. 30, 1992, Grinding wheel having grinding monitoring
and automatic wheel balance **control** functions; Koji Ogawa, et al.,
**451/5**; 74/573R, 574; **451/6**; **7**; **10**; **21**; **343** [IMAGE
AVAILABLE]

28. 5,117,180, May 26, 1992, Method and apparatus for measuring RMS
values; Ronald L. Swerlein, 324/132; 327/349; **364/483** [IMAGE
AVAILABLE]

29. 5,113,728, May 19, 1992, Method and apparatus for forming
intermittent chips when machining a rotating workpiece; Ludwik A.
Medeksa, **82/1.11**; **134**; **137**; **904**; 408/1R, 17 [IMAGE
AVAILABLE]

30. 5,109,417, Apr. 28, 1992, Low bit rate transform coder, decoder, and
encoder/decoder for high-quality audio; Louis D. Fielder, et al., 381/36;
**364/715.04**; **748**; 375/240; 381/29; 395/2.12, 2.14, 2.33, 2.38
[IMAGE AVAILABLE]

31. 5,101,599, Apr. 7, 1992, Ultrasonic machine having amplitude
**control** unit; Hideki Takabayasi, et al., **451/165**; 83/701; 173/11;
**451/11**; **910** [IMAGE AVAILABLE]

32. 5,100,270, Mar. 31, 1992, Apparatus and method for **cutting** mat
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board; Robert K. Dowdle, et al., \*\*409/132\*\*; 83/100, 956; 144/252R;  
\*\*409/137\*\*; \*\*192\*\*; \*\*202\*\*; \*\*203\*\* [IMAGE AVAILABLE]

33. 5,076,020, Dec. 31, 1991, Apparatus for in-situ dressing of threaded grinding wheels used in gear grinding machines; Roberto Negri,  
\*\*451/21\*\*; 125/11.02, 11.13; \*\*451/56\*\*; \*\*72\*\* [IMAGE AVAILABLE]

34. 5,058,437, Oct. 22, 1991, Determining the quantity yield of a compressible fluid flowing through a pressure reducing valve; Claude Chaumont, et al., 73/861.21; \*\*364/510\*\* [IMAGE AVAILABLE]

35. 5,054,340, Oct. 8, 1991, Apparatus for machining a non-circular workpiece; Kazuhiko Sugita, et al., \*\*82/18\*\*; \*\*118\*\*; \*\*137\*\*; \*\*904\*\* [IMAGE AVAILABLE]

36. 5,050,468, Sep. 24, 1991, Method and apparatus for \*\*cutting\*\* a circumferential serpentine groove in a workpiece using an engine  
\*\*lathe\*\*; James D. Nydigger, \*\*82/1.11\*\*; \*\*18\*\*; \*\*118\*\*; \*\*134\*\*;  
\*\*364/474.02\*\* [IMAGE AVAILABLE]

37. 5,042,335, Aug. 27, 1991, Method and apparatus for manufacturing a body with a surface of revolution at its end with the axis thereof aligned with an axis of the body; Moreno Ciboldi, et al., \*\*82/117\*\*;  
\*\*118\*\*; \*\*903\*\*; \*\*904\*\*; \*\*451/6\*\* [IMAGE AVAILABLE]

38. 5,018,913, May 28, 1991, Device for controlling the tool position depending on the stroke position; Walter Seibertich, \*\*409/34\*\*; \*\*60\*\*;  
\*\*334\*\* [IMAGE AVAILABLE]

39. 5,010,491, Apr. 23, 1991, Automated system for machining parts to close tolerances; Alberto Biasillo, et al., \*\*364/474.28\*\*; \*\*167.01\*\*;  
\*\*474.06\*\*; \*\*474.37\*\* [IMAGE AVAILABLE]

40. 5,010,224, Apr. 23, 1991, Very small orifice manufacturing system; Roy D. Shirey, et al., 219/69.17; 73/4R, 37.5; \*\*364/474.04\*\*; \*\*552\*\*;  
408/2 [IMAGE AVAILABLE]

41. 5,001,649, Mar. 19, 1991, Linear power \*\*control\*\* for ultrasonic probe with tuned reactance; Ying-Ching Lo, et al., \*\*364/484\*\*; 310/316;  
323/205, 206; 324/727; 331/IR, 36R, 181; \*\*364/481\*\* [IMAGE AVAILABLE]

42. 4,999,954, Mar. 19, 1991, Polishing apparatus; Masahiko Miyamoto, et al., \*\*451/5\*\*; \*\*277\*\* [IMAGE AVAILABLE]

43. 4,984,394, Jan. 15, 1991, Method and apparatus for grinding straight-edged \*\*cutting\*\* tools to a fine finish; Hiromi Suzuki, et al.,  
\*\*451/5\*\*; \*\*24\*\*; \*\*160\*\*; \*\*259\*\*; \*\*278\*\* [IMAGE AVAILABLE]

44. 4,974,368, Dec. 4, 1990, Polishing apparatus; Masahiko Miyamoto, et al., \*\*451/159\*\*; \*\*99\*\*; \*\*276\*\*; \*\*280\*\* [IMAGE AVAILABLE]

45. 4,970,656, Nov. 13, 1990, Analog drive for ultrasonic probe with tunable phase angle; Ying-Ching Lo, et al., \*\*364/481\*\*; 73/589, 648;  
310/316; 318/116; 323/208, 211; 331/36R; \*\*364/484\*\* [IMAGE AVAILABLE]

46. 4,958,286, Sep. 18, 1990, Time-variant filter coefficients; Wallace H. Meyer, Jr., \*\*364/422\*\*; 73/151; 324/338, 339 [IMAGE AVAILABLE]

47. 4,954,960, Sep. 4, 1990, Linear power \*\*control\*\* for ultrasonic probe with tuned reactance; Ying-Ching Lo, et al., \*\*364/484\*\*; 318/729;  
323/205, 208; 324/654; 331/181; \*\*364/482\*\*; \*\*571.01\*\* [IMAGE AVAILABLE]

48. 4,947,715, Aug. 14, 1990, Method and apparatus for \*\*cutting\*\* an aspheric surface on a workpiece; Buford W. Council, Jr., \*\*82/1.11\*\*;  
\*\*12\*\*; \*\*18\*\*; \*\*142\*\*; \*\*147\*\*; \*\*451/42\*\*; \*\*277\*\* [IMAGE AVAILABLE]

49. 4,936,052, Jun. 26, 1990, Machine and method of grinding molding die; Noboru Nagase, et al., \*\*451/152\*\*; \*\*99\*\*; \*\*127\*\*; \*\*160\*\*; \*\*913\*\* [IMAGE AVAILABLE]

50. 4,928,561, May 29, 1990, Method and apparatus for ultra-precise machining applied to executing atypical surfaces of revolution and to servo-controlled machining; Claude Fouché, \*\*82/1.11\*\*; \*\*147\*\*; 310/90.5 [IMAGE AVAILABLE]

51. 4,918,616, Apr. 17, 1990, Tool monitoring system; Kiyokazu Yoshimura, et al., \*\*364/507\*\*; 73/587; 340/680; \*\*364/474.17\*\*;  
\*\*474.37\*\*; \*\*508\*\*; \*\*551.02\*\* [IMAGE AVAILABLE]

52. 4,911,044, Mar. 27, 1990, Ultrasonic vibration \*\*cutting\*\* device; Shoji Mishiho, et al., \*\*82/158\*\*; \*\*160\*\*; \*\*904\*\* [IMAGE AVAILABLE]

53. 4,896,460, Jan. 30, 1990, Rail grinding machine; Josef Theurer, et al., \*\*451/347\*\* [IMAGE AVAILABLE]

54. 4,884,941, Dec. 5, 1989, Active compliant end-effector with force, angular position, and angular velocity sensing; Homayoon Kazerooni, 414/744.5; 74/479.01; 414/917; \*\*451/5\*\*; \*\*11\*\*; 901/9, 41, 45 [IMAGE AVAILABLE]

AVAILABLE]

55. 4,884,482, Dec. 5, 1989, Method and apparatus for \*\*cutting\*\* an aspheric surface on a workpiece; Buford W. Council, Jr., \*\*82/1.11\*\*;  
\*\*12\*\*; \*\*18\*\*; \*\*142\*\*; \*\*147\*\*; \*\*451/5\*\*; \*\*42\*\* [IMAGE AVAILABLE]

56. 4,845,900, Jul. 11, 1989, Method and apparatus for grinding straight-edged \*\*cutting\*\* tools to a fine finish; Hiromi Suzuki, et al.,  
\*\*451/5\*\*; \*\*45\*\*; \*\*160\*\*; \*\*262\*\* [IMAGE AVAILABLE]

57. 4,839,814, Jun. 13, 1989, Size independent modular web processing line and modules; Leonard R. Steidel, \*\*364/469\*\*; 101/248; 226/29, 111 [IMAGE AVAILABLE]

58. 4,837,506, Jun. 6, 1989, Apparatus including a focused UV light source for non-contact measurement and alteration of electrical properties of conductors; Joseph M. Patterson, 324/752; 250/311;  
\*\*364/571.01\*\* [IMAGE AVAILABLE]

59. 4,821,205, Apr. 11, 1989, Seismic isolation system with reaction mass; Herman P. Schutten, et al., \*\*364/508\*\*; 248/550, 638 [IMAGE AVAILABLE]

60. 4,817,268, Apr. 4, 1989, Method of and arrangement for exchanging tool holders in working units for working of workpieces; Hans-Ulrich Jaissle, et al., 483/1; 29/26A, 426.1, 426.3; 408/35; \*\*409/201\*\*;  
414/744.4; 483/32, 53, 56 [IMAGE AVAILABLE]

61. 4,807,167, Feb. 21, 1989, Rapid method of digital automatic gain \*\*control\*\*; Ben A. Green, Jr., \*\*364/571.04\*\*; 330/284; 340/683;  
\*\*364/508\*\* [IMAGE AVAILABLE]

62. 4,805,111, Feb. 14, 1989, Size independent modular web processing line and modules; Leonard R. Steidel, \*\*364/469\*\*; 101/181, 248; 226/9, 29, 111; 318/625; \*\*364/138\*\*; \*\*174\*\*; \*\*471\*\* [IMAGE AVAILABLE]

63. 4,782,452, Nov. 1, 1988, Acoustic detection of milling tool touch to a workpiece; Charles E. Thomas, \*\*364/550\*\*; 73/609, 660; 340/680, 683;  
\*\*364/508\*\* [IMAGE AVAILABLE]

64. 4,771,792, Sep. 20, 1988, Non-invasive determination of mechanical characteristics in the body; Joseph B. Seale, 128/774; 73/575; 128/649, 677; \*\*364/508\*\* [IMAGE AVAILABLE]

65. 4,764,760, Aug. 16, 1988, Automatic gain \*\*control\*\* for machine tool monitor; James F. Bedard, et al., 340/680; 73/104, 660; 340/683;  
\*\*364/474.17\*\* [IMAGE AVAILABLE]

66. 4,762,040, Aug. 9, 1988, Blade sharpening and guide mechanism; Bernardo Alcantara Perez, et al., 83/56, 76.8, 174, 940; \*\*451/58\*\*;  
\*\*420\*\* [IMAGE AVAILABLE]

67. 4,759,243, Jul. 26, 1988, Method and apparatus for optimizing single point machining operations; Robert A. Thompson, \*\*82/1.11\*\* [IMAGE AVAILABLE]

68. 4,758,964, Jul. 19, 1988, Method and apparatus for monitoring machine parts; Gerd Bittner, et al., \*\*364/508\*\*; 73/579, 660; 340/680, 683; \*\*364/506\*\*; \*\*550\*\* [IMAGE AVAILABLE]

69. 4,753,048, Jun. 28, 1988, Method of for grinding; Haruhiko Asada, et al., \*\*451/11\*\*; \*\*26\*\*; \*\*28\*\*; \*\*182\*\* [IMAGE AVAILABLE]

70. 4,724,524, Feb. 9, 1988, \*\*Vibration\*\* sensing \*\*tool\*\* break and touch detector optimized for machining conditions; Charles E. Thomas, et al., \*\*364/474.17\*\*; 73/104, 660; 340/680; \*\*364/148\*\*; \*\*157\*\*;  
\*\*474.15\*\*; \*\*474.37\*\*; \*\*508\*\* [IMAGE AVAILABLE]

71. 4,719,586, Jan. 12, 1988, Manufacturing process \*\*control\*\*; John A. Moyer, et al., \*\*364/552\*\*; \*\*183\*\*; \*\*468\*\*; \*\*571.02\*\*; \*\*DIG.2\*\* [IMAGE AVAILABLE]

72. 4,704,693, Nov. 3, 1987, Acoustic tool touch detector with minimized detection delay; Charles E. Thomas, \*\*364/508\*\*; 73/609, 660; 340/680, 683; \*\*364/474.18\*\*; \*\*551.01\*\* [IMAGE AVAILABLE]

73. 4,694,401, Sep. 15, 1987, Apparatus for forming diverse shapes using a look-up table and an inverse transfer function; Toshiro Higuchi, \*\*364/474.11\*\*; \*\*474.02\*\*; \*\*474.29\*\*; \*\*474.35\*\*; \*\*553\*\* [IMAGE AVAILABLE]

74. 4,693,146, Sep. 15, 1987, Method and apparatus for achieving chip separation while machining work pieces; Theodor Dombrowski, et al.,  
\*\*82/118\*\*; \*\*11.5\*\*; \*\*104\*\*; \*\*137\*\*; \*\*904\*\* [IMAGE AVAILABLE]

75. 4,680,998, Jul. 21, 1987, Toric lenses, method and apparatus for making same; Buford W. Council, Jr., \*\*82/1.11\*\*; \*\*12\*\*; \*\*18\*\*;  
\*\*118\*\*; \*\*137\*\*; \*\*451/42\*\*; \*\*163\*\*; \*\*277\*\* [IMAGE AVAILABLE]

76. 4,667,546, May 26, 1987, Method for achieving chip separation while

machining work pieces; Theodor Dombrowski, et al., \*\*82/104\*\*, \*\*133\*\*, \*\*137\*\*, \*\*904\*\* [IMAGE AVAILABLE]

77. 4,657,451, Apr. 14, 1987, Contact detector for a machine tool; Yuzuru Tanaka, \*\*409/186\*\*, 324/207.17, 207.23, 226; 408/6, 13 [IMAGE AVAILABLE]

78. 4,656,868, Apr. 14, 1987, Method and apparatus for discriminating \*\*cutting\*\* state from non-\*\*cutting\*\* state in machine tool; Hidekazu Azuma, et al., 73/587; 83/72; 340/680; 408/11; \*\*409/194\*\*, \*\*451/9\*\* [IMAGE AVAILABLE]

79. 4,646,754, Mar. 3, 1987, Non-invasive determination of mechanical characteristics in the body; Joseph B. Seale, 128/774; 73/575; 128/649, 677; \*\*364/508\*\* [IMAGE AVAILABLE]

80. 4,642,617, Feb. 10, 1987, Acoustic tool break detection system and method; Charles E. Thomas, et al., 340/680; 73/104, 660; 340/683; \*\*364/474.17\*\* [IMAGE AVAILABLE]

81. 4,640,156, Feb. 3, 1987, Production of short metal fibers; Takeo Nakagawa, et al., \*\*82/1.11\*\*, 29/4.53; 144/42; 407/10, 114, 115 [IMAGE AVAILABLE]

82. 4,638,433, Jan. 20, 1987, Microprocessor controlled garage door operator; Wayne R. Schindler, \*\*364/400\*\*, 49/28; 160/189; 318/264, 265, 266 [IMAGE AVAILABLE]

83. 4,636,780, Jan. 13, 1987, Acoustic monitoring of \*\*cutting\*\* conditions to detect tool break events; Charles E. Thomas, et al., 340/680; 73/104, 660; 340/683; \*\*364/474.17\*\* [IMAGE AVAILABLE]

84. 4,636,779, Jan. 13, 1987, Acoustic detection of tool break events in machine tool operations; Charles E. Thomas, et al., 340/680; 73/104, 660; 340/683; \*\*364/474.17\*\* [IMAGE AVAILABLE]

85. 4,632,612, Dec. 30, 1986, Spindle orientation apparatus; Richard J. Loerch, \*\*409/231\*\*, 408/9 [IMAGE AVAILABLE]

86. 4,631,683, Dec. 23, 1986, Acoustic detection of contact between \*\*cutting\*\* tool and workpiece; Charles E. Thomas, et al., \*\*364/474.01\*\*, 73/609, 613, 660; 318/563; \*\*364/183\*\*, \*\*184\*\*, \*\*474.17\*\*, \*\*474.37\*\*, \*\*508\*\*, 371/5.3, 62, 64; 377/16 [IMAGE AVAILABLE]

87. 4,618,729 Oct. 21, 1986, Method and apparatus for machining racks for steering gear; Arthur E. Bishop, et al., \*\*409/58\*\*, \*\*451/127\*\*, \*\*137\*\*, \*\*215\*\* [IMAGE AVAILABLE]

88. 4,617,503, Oct. 14, 1986, Active datum for coordinate reference in a numerically controlled machine tool; Richard K. Davis, et al., 318/572, 39; \*\*364/474.34\*\* [IMAGE AVAILABLE]

89. 4,606,386, Aug. 19, 1986, Universal profiling machine; Carl R. Walker, 144/134B, 2R, 134A, 137, 145A; \*\*409/220\*\*, \*\*224\*\* [IMAGE AVAILABLE]

90. 4,584,916, Apr. 29, 1986, Lead face machining apparatus; Mamoru Inoue, et al., \*\*82/19\*\*, \*\*147\*\*, 384/12; \*\*409/904\*\* [IMAGE AVAILABLE]

91. 4,584,915, Apr. 29, 1986, \*\*Control\*\* system for a cam follower and tool; Takashi Ichinyanagi, et al., \*\*82/19\*\*, \*\*118\*\*, 318/578; \*\*364/474.02\*\*, \*\*409/127\*\* [IMAGE AVAILABLE]

92. 4,565,474, Jan. 21, 1986, Method of generating involute tooth forms with a milling \*\*cutter\*\*, Paul A. S. Charles, \*\*409/51\*\*, \*\*38\*\*, \*\*40\*\*, \*\*55\*\*, \*\*451/147\*\* [IMAGE AVAILABLE]

93. 4,563,897, Jan. 14, 1986, Apparatus for monitoring tool life; Arthur I. W. Moore, 73/587, 104; \*\*364/157\*\*, \*\*474.17\*\* [IMAGE AVAILABLE]

94. 4,562,392, Dec. 31, 1985, Stylus type touch probe system; Richard K. Davis, et al., 318/572; \*\*82/11.2\*\*, 318/39, 632; \*\*364/474.34\*\*, \*\*474.37\*\* [IMAGE AVAILABLE]

95. 4,558,311, Dec. 10, 1985, Method and apparatus for monitoring the tool status in a tool machine with cyclic machining; Roland Forsgren, et al., 340/680; 73/660; \*\*364/474.17\*\* [IMAGE AVAILABLE]

96. 4,554,495, Nov. 19, 1985, Datum reference for tool touch probe system; Richard K. Davis, 318/572, 640; \*\*364/474.3\*\*, \*\*474.34\*\*, \*\*474.37\*\* [IMAGE AVAILABLE]

97. 4,547,847, Oct. 15, 1985, Adaptive \*\*control\*\* for machine tools; Eugene A. Olig, et al., \*\*364/148\*\*, 318/561; \*\*364/164\*\*, \*\*474.15\*\*, \*\*474.17\*\*, \*\*511\*\* [IMAGE AVAILABLE]

98. 4,547,777, Oct. 15, 1985, Method of radio-position-finding through determination of phases of electromagnetic waves and receiving device for practicing the method; Christian Lamiraux, 342/394, 395; \*\*364/452\*\*;

455/77, 195.1 [IMAGE AVAILABLE]

99. 4,541,055, Sep. 10, 1985, Laser machining system; Donald L. Wolfe, et al., \*\*364/474.08\*\*, 219/121.82; \*\*364/142\*\*, \*\*400\*\*, \*\*559\*\*, 376/261 [IMAGE AVAILABLE]

100. 4,524,812, Jun. 25, 1985, Modulated forming machine; Peter H. Murphy, 144/134A; 83/72, 477.2; 144/356; 318/39; \*\*409/148\*\*, \*\*183\*\* [IMAGE AVAILABLE]

101. 4,513,376, Apr. 23, 1985, Phasor processing of induction logs including skin effect correction; Thomas D. Barber, \*\*364/422\*\*, 324/339 [IMAGE AVAILABLE]

102. 4,511,977, Apr. 16, 1985, Punch marker height \*\*control\*\*, Daryl Schuettpelz, \*\*364/474.34\*\*, \*\*474.35\*\*, \*\*569\*\*, 377/16 [IMAGE AVAILABLE]

103. 4,510,717, Apr. 16, 1985, Lens finishing apparatus; Dewayne J. Sherwin, \*\*451/163\*\*, D15/124, 125 [IMAGE AVAILABLE]

104. 4,486,866, Dec. 4, 1984, Seismic exploration using non-impulsive vibratory sources activated by stationary, Gaussian codes, and processing that results in distortion-free final records particularly useful in stratigraphic trap determination; Francis Muir, 367/39; \*\*364/421\*\*, 367/100 [IMAGE AVAILABLE]

105. 4,484,931, Nov. 27, 1984, Thread grinder; Anthony Kushigian, \*\*451/222\*\*, \*\*141\*\* [IMAGE AVAILABLE]

106. 4,471,436, Sep. 11, 1984, Phasor processing of induction logs including shoulder and skin effect correction; Richard T. Schaefer, et al., \*\*364/422\*\*, 324/339 [IMAGE AVAILABLE]

107. 4,467,425, Aug. 21, 1984, Deconvolution filter for induction log processing; Richard T. Schaefer, et al., \*\*364/422\*\*, 324/339 [IMAGE AVAILABLE]

108. 4,460,275, Jul. 17, 1984, Method and apparatus adapted for automatic or semi-automatic fabrication of ultra-precision ophthalmic lenses, e.g., contact lenses; Robert G. Spriggs, 356/358, 363; \*\*451/6\*\*, \*\*42\*\* [IMAGE AVAILABLE]

109. 4,451,187, May 29, 1984, Machine tool; Michio Ishikawa, et al., \*\*409/187\*\*, 408/11, 17; \*\*409/186\*\*, \*\*194\*\* [IMAGE AVAILABLE]

110. 4,441,103, Apr. 3, 1984, Unusual vibration transducer apparatus in machine tools; Hirokuni Urabe, 340/680, 683; \*\*364/474.17\*\*, \*\*451/11\*\* [IMAGE AVAILABLE]

111. 4,434,581, Mar. 6, 1984, Apparatus adapted for automatic or semi-automatic fabrication of ultra-precision ophthalmic lenses, e.g., contact lenses; Robert G. Spriggs, \*\*451/173\*\*, \*\*82/11\*\*, \*\*451/42\*\* [IMAGE AVAILABLE]

112. 4,422,265, Dec. 27, 1983, Multistation grinding machine; Keith Branton, \*\*451/147\*\*, \*\*409/158\*\*, \*\*198\*\*, \*\*451/64\*\*, \*\*413\*\*, D15/124 [IMAGE AVAILABLE]

113. 4,419,912, Dec. 13, 1983, Vibration threading \*\*lathe\*\* for precision screw \*\*cutting\*\*, Tatuo Sotome, et al., \*\*82/110\*\*, \*\*11.1\*\*, \*\*904\*\* [IMAGE AVAILABLE]

114. 4,417,489, Nov. 29, 1983, Method and apparatus for machining a workpiece by varying the tool geometry; Chunghorng R. Liu, \*\*82/1.11\*\*, \*\*158\*\* [IMAGE AVAILABLE]

115. 4,412,465, Nov. 1, 1983, Tool compensator; Lawrence B. Wright, \*\*82/1.2\*\*, \*\*118\*\*, \*\*133\*\*, 408/12, 13, 130 [IMAGE AVAILABLE]

116. 4,410,970, Oct. 18, 1983, Method and apparatus for measuring and analyzing sound characteristics of record discs; Kenneth S. K. Law, 369/58; 73/659; 324/76.12; \*\*364/485\*\* [IMAGE AVAILABLE]

117. 4,409,659, Oct. 11, 1983, Programmable power supply for ultrasonic applications; Janet Devine, \*\*364/474.16\*\*, \*\*82/118\*\*, 83/701, 956; 228/1.1, 7, 8, 110.1; \*\*364/474.02\*\*, \*\*508\*\*, \*\*511\*\*, 408/700 [IMAGE AVAILABLE]

118. 4,393,624, Jul. 19, 1983, Thread grinder; Anthony Kushigian, \*\*451/24\*\*, \*\*72\*\*, \*\*222\*\* [IMAGE AVAILABLE]

119. 4,385,473, May 31, 1983, Method for frequency regulation of tuning-fork vibrator; Shigeo Aoki, et al., \*\*451/1\*\*, 29/25.35; 310/312, 370; \*\*451/57\*\* [IMAGE AVAILABLE]

120. 4,356,376, Oct. 26, 1982, Pulse laser pretreated machining; Ranga Komanduri, et al., 219/121.72; 29/27C; \*\*82/1.11\*\*, 219/121.67, 121.68, 121.69, 121.7, 121.71, 121.84 [IMAGE AVAILABLE]

121. 4,355,310, Oct. 19, 1982, Well logging communication system; Antoine Belaguires, et al., 340/853.2, 825.54, 855.4; \*\*364/422\*\* [IMAGE AVAILABLE]
122. 4,346,461, Aug. 24, 1982, Seismic exploration using vibratory sources, sign-bit recording, and processing that maximizes the obtained subsurface information; Francis Muir, 367/39; \*\*364/421\*\*; 367/100 [IMAGE AVAILABLE]
123. 4,328,549, May 4, 1982, Process flow \*\*computer\*\* \*\*control\*\* system; Cecil T. Avery, \*\*364/469\*\*; 264/40.7, 321; \*\*364/476\*\*; 425/145; 521/918 [IMAGE AVAILABLE]
124. 4,292,769, Oct. 6, 1981, Balancing and monitoring apparatus; Willi Maag, et al., \*\*451/9\*\*; 73/468; 74/573R; \*\*451/11\*\*; \*\*343\*\* [IMAGE AVAILABLE]
125. 4,272,924, Jun. 16, 1981, Method of ultrasonic \*\*control\*\* for lapping and an apparatus therefor; Masami Masuko, et al., \*\*451/1\*\*; 73/597; 367/96; \*\*451/41\*\*; \*\*269\*\*; \*\*287\*\* [IMAGE AVAILABLE]
126. 4,272,812, Jun. 9, 1981, Numerical \*\*control\*\* apparatus for stepped feeding at punch and nibbling machines; Sven L. I. Svensson, \*\*364/474.02\*\*; 83/76.8, 203, 277, 916; 318/39, 603; \*\*364/474.28\*\*; \*\*474.32\*\* [IMAGE AVAILABLE]
127. 4,268,999, May 26, 1981, Automatic polishing apparatus; Koichi Noto, et al., \*\*451/5\*\*; \*\*6\*\* [IMAGE AVAILABLE]
128. 4,249,538, Feb. 10, 1981, Electronic clinic apparatus; Toshimitsu Musha, et al., 128/630, 639, 696, 709; \*\*364/413.05\*\*; \*\*413.06\*\*; 505/846 [IMAGE AVAILABLE]
129. 4,227,405, Oct. 14, 1980, Digital mineral logging system; Jerry B. West, 340/853.8; 33/313; 340/853.9, 855.3, 855.5; \*\*364/422\*\*; 367/81 [IMAGE AVAILABLE]
130. 4,227,404, Oct. 14, 1980, Digital mineral logging system; Jerry B. West, 73/151; \*\*364/422\*\* [IMAGE AVAILABLE]
131. 4,209,951, Jul. 1, 1980, Piston ring honing; Robert H. Gillette, \*\*451/1\*\*; \*\*51\*\*; \*\*173\*\* [IMAGE AVAILABLE]
132. 4,207,708, Jun. 17, 1980, Piston ring honing; Robert H. Gillette, \*\*451/173\*\*; \*\*140\*\* [IMAGE AVAILABLE]
133. 4,195,250, Mar. 25, 1980, Automatic measuring and tool position compensating system for a numerically controlled machine tool; Tamotsu Yamamoto, 318/561, 572, 626, 632, 634; \*\*364/474.35\*\*; \*\*474.37\*\* [IMAGE AVAILABLE]
134. 4,188,936, Feb. 19, 1980, Method for increasing the \*\*cutting\*\* performance of reciprocating slurry saws and a reciprocating slurry saw for carrying out this method; Alfred Stauffer, 125/16.01; \*\*451/41\*\*; \*\*165\*\* [IMAGE AVAILABLE]
135. 4,181,029, Jan. 1, 1980, Multi-axis, complex mode pneumatically actuated annular frame shaker for quasi-random pneumatic vibration facility; Charles F. Talbott, Jr., 73/665; \*\*364/508\*\* [IMAGE AVAILABLE]
136. 4,181,026, Jan. 1, 1980, Quasi-random pneumatic vibration facility and automatic frequency modulating system therefor; Henry T. Abstein, Jr., et al., 73/665; \*\*364/508\*\* [IMAGE AVAILABLE]
137. 4,181,025, Jan. 1, 1980, Means for adjusting the area of an orifice in a vibration system; Henry T. Abstein, Jr., et al., 73/665; 251/304; \*\*364/508\*\* [IMAGE AVAILABLE]
138. 4,177,700, Dec. 11, 1979, \*\*Turning\*\* machine tool; Eberhard van der Horst, \*\*82/117\*\*; \*\*129\*\* [IMAGE AVAILABLE]
139. 4,175,537, Nov. 27, 1979, Dressing arrangement for grinding wheel of a gear form grinding machine; Dieter Wiener, 125/11.03; \*\*451/47\*\* [IMAGE AVAILABLE]
140. 4,154,024, May 15, 1979, Electric \*\*control\*\* device for an automatic grinding machine; Frank D. Rajczi, \*\*451/8\*\* [IMAGE AVAILABLE]
141. 4,130,073, Dec. 19, 1978, Automatic sewing machine; Koya Kimura, et al., 112/470.06, 470.07; \*\*409/79\*\* [IMAGE AVAILABLE]
142. 4,114,486, Sep. 19, 1978, \*\*Lathe\*\* for generating spherical or aspherical surfaces on workpieces, method for generating aspherical surfaces on workpieces and workpiece having aspherical surface; Derrell C. Hooker, \*\*82/12\*\*; \*\*451/277\*\* [IMAGE AVAILABLE]
143. 4,095,916, Jun. 20, 1978, Timed intermittent air propelled liquid coolant system for machine tools; Earl J. Hammond, 408/1R; \*\*82/1.11\*\*; 407/11; 408/59, 61; \*\*409/136\*\* [IMAGE AVAILABLE]
144. 4,068,414, Jan. 17, 1978, Automatic flute grinding machine; Charles Thomas Breitenstein, et al., \*\*451/4\*\*; \*\*48\*\* [IMAGE AVAILABLE]
145. 4,058,938, Nov. 22, 1977, Method and apparatus for grinding the tooth flanks of internally-toothed gear wheels; Hermann Harle, et al., \*\*451/47\*\*; \*\*409/33\*\*; \*\*451/121\*\*; \*\*147\*\* [IMAGE AVAILABLE]
146. 4,047,469, Sep. 13, 1977, Method for suppressing chatter \*\*vibrations\*\* in a machine \*\*tool\*\*; Okitsugu Sakata, \*\*409/132\*\*; \*\*82/1.11\*\*; \*\*904\*\*; 408/143; \*\*409/141\*\* [IMAGE AVAILABLE]
147. 4,045,919, Sep. 6, 1977, High speed grinding spindle; Sadao Moritomo, \*\*451/11\*\*; \*\*27\*\*; \*\*294\*\* [IMAGE AVAILABLE]
148. 4,045,917, Sep. 6, 1977, Gear grinding machine; Herbert Loos, et al., \*\*451/275\*\* [IMAGE AVAILABLE]
149. 4,031,368, Jun. 21, 1977, Adaptive \*\*control\*\* of \*\*cutting\*\* machining operations; Bertil Colding, et al., \*\*364/474.15\*\*; \*\*82/1.11\*\*; 356/371, 373, 384, 447, 448; \*\*364/474.02\*\*; \*\*474.17\*\*; \*\*511\*\* [IMAGE AVAILABLE]
150. 4,027,245, May 31, 1977, Numerically controlled machine tool; Pierre Bourrat, et al., \*\*364/474.06\*\*; \*\*474.31\*\*; \*\*451/5\*\*; \*\*251\*\* [IMAGE AVAILABLE]
151. 4,019,288, Apr. 26, 1977, Grinding method and apparatus; Sadao Moritomo, \*\*451/11\*\*; \*\*27\*\*; \*\*58\*\* [IMAGE AVAILABLE]
152. 4,014,227, Mar. 29, 1977, Wire guided roll crowning attachment for \*\*lathes\*\*; Richard J. Adams, \*\*82/173\*\*; 33/613; \*\*82/11\*\*; 408/13; \*\*451/142\*\* [IMAGE AVAILABLE]
153. 3,967,515, Jul. 6, 1976, Apparatus for controlling vibrational chatter in a machine-tool utilizing an updated synthesis circuit; Chester L. Nachtigal, et al., \*\*82/118\*\*; \*\*904\*\*; 318/561; \*\*364/150\*\*; \*\*151\*\*; \*\*174\*\*; \*\*474.35\*\*; \*\*409/80\*\*; \*\*141\*\*; \*\*451/11\*\*; \*\*26\*\*; \*\*242\*\* [IMAGE AVAILABLE]
154. 3,936,828, Feb. 3, 1976, VLF navigation system; Allen R. Muesse, et al., 342/394; \*\*364/452\*\* [IMAGE AVAILABLE]
155. 3,934,376, Jan. 27, 1976, Apparatus for controlling the operation of a grinding wheel; Teyoshi Tamesui, et al., \*\*451/25\*\* [IMAGE AVAILABLE]
156. 3,906,207, Sep. 16, 1975, \*\*Control\*\* system of the analogue-digital-analogue type with a digital \*\*computer\*\* having multiple functions for an automobile vehicle; Jean-Pierre Rivere, et al., \*\*364/425\*\*; 73/117.3; 123/416, 486, 493, 571 [IMAGE AVAILABLE]
157. 3,903,653, Sep. 9, 1975, Lapping machine; Harold J. Imhoff, et al., \*\*451/26\*\*; \*\*164\*\* [IMAGE AVAILABLE]
158. 3,898,767, Aug. 12, 1975, Automatic recipro-finish machine; Hisamine Kobayashi, \*\*451/113\*\*; \*\*11\*\*; \*\*334\*\* [IMAGE AVAILABLE]
159. 3,889,520, Jun. 17, 1975, Fluidic system for monitoring machine tool wear during a machining operation; Theodor Stofler, et al., 73/37.5, 104; \*\*82/118\*\*; 407/11, 120 [IMAGE AVAILABLE]
160. 3,857,025, Dec. 24, 1974, NUMERICALLY CONTROLLED ENGRAVING MACHINE SYSTEM; Myrle H. English, et al., \*\*364/474.02\*\*; 33/23.01; 318/568.1; \*\*364/131\*\*; \*\*193\*\*; \*\*474.22\*\*; \*\*474.32\*\*; \*\*578\*\*; \*\*409/80\*\*; \*\*84\*\* [IMAGE AVAILABLE]
161. 3,849,940, Nov. 26, 1974, HONING MACHINE; Tsutomu Yoshino, et al., \*\*451/27\*\*; \*\*150\*\* [IMAGE AVAILABLE]
162. 3,841,149, Oct. 15, 1974, TOOL WEAR DETECTOR; Allan I. Edwin, et al., 73/659, 104; \*\*364/508\*\*; \*\*551.02\*\* [IMAGE AVAILABLE]
163. 3,827,334, Aug. 6, 1974, NUMERICALLY CONTROLLED ENGRAVING MACHINE SYSTEM; Myrle H. English, et al., \*\*409/80\*\*; 125/6; 173/190; \*\*409/216\*\* [IMAGE AVAILABLE]
164. 3,817,647, Jun. 18, 1974, TOOL \*\*CONTROL\*\* ARRANGEMENT; Jerome H. Lemelson, 408/8; \*\*82/900\*\*; 408/6 [IMAGE AVAILABLE]
165. 3,788,009, Jan. 29, 1974, CONTROLLED TOOL FOR MACHINING COMPOUND SURFACES; Thurston V. Williams, et al., \*\*451/1\*\*; \*\*72\*\*; \*\*237\*\* [IMAGE AVAILABLE]
166. 3,784,798, Jan. 8, 1974, ADAPTIVE MACHINING; Bruce R. Beadle, et

al., \*\*364/474.15\*\*, \*\*153\*\*, \*\*156\*\*, \*\*474.16\*\* [IMAGE AVAILABLE]

167. 3,769,762, Nov. 6, 1973, METHOD FOR CONTROLLED LAPPING OF OPTICAL SURFACES TO CORRECT DEVIATIONS FROM DESIRED CONTOURS; Marvin J. Mayo, \*\*451/42\*\* [IMAGE AVAILABLE]

168. 3,757,638, Sep. 11, 1973, FIVE-AXIS SHAPER; Joseph Martin, \*\*409/335\*\*, 74/842; 173/160; 408/135, 235; \*\*409/337\*\* [IMAGE AVAILABLE]

169. 3,738,225, Jun. 12, 1973, METHOD FOR MACHINING GROOVES AND GEAR TEETH; Michel Tixier, \*\*409/12\*\*, \*\*20\*\*, \*\*34\*\* [IMAGE AVAILABLE]

170. 3,736,113, May 29, 1973, SPIRAL GRINDING RELIEVING MACHINE WITH TANDEM PLANETARY DIFFERENTIAL DRIVE; Walter Umbdenstock, et al., \*\*451/374\*\*, \*\*220\*\*, \*\*221\*\*, \*\*394\*\*, \*\*465\*\* [IMAGE AVAILABLE]

171. 3,735,534, May 29, 1973, APPARATUS FOR CONTROLLED LAPPING OF OPTICAL SURFACES TO CORRECT DEVIATIONS FROM DESIRED CONTOURS; Marvin J. Mayo, \*\*451/162\*\*, \*\*6\*\*, \*\*173\*\* [IMAGE AVAILABLE]

172. 3,720,814, Mar. 13, 1973, DIRECT NUMERICAL \*\*CONTROL\*\* SYSTEM; John Klein, \*\*364/138\*\*, 318/569, 573; \*\*364/474.11\*\*, \*\*474.31\*\* [IMAGE AVAILABLE]

173. 3,713,254, Jan. 30, 1973, CONTROLLED TOOL FOR MACHINING COMPOUND SURFACES; Thurston V. Williams, et al., \*\*451/125\*\*, \*\*237\*\*, \*\*374\*\* [IMAGE AVAILABLE]

174. 3,709,093, Jan. 9, 1973, METHOD OF \*\*CUTTING\*\* GEAR TEETH OF HOMOKINETIC JOINTS OF HYDRAULIC PUMPS AND MOTORS; Francois C. Pruvot, et al., \*\*409/46\*\*, \*\*48\*\* [IMAGE AVAILABLE]

175. 3,688,447, Sep. 5, 1972, GRINDING MACHINE; Herbert R. Uhtenwoldt, et al., \*\*451/226\*\*, \*\*25\*\* [IMAGE AVAILABLE]

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3. 5,418,731, May 23, 1995, Numerical \*\*control\*\* unit for non-circular workpiece fabricating machine; Tatsuhiro Yoshimura, et al., \*\*364/474.31\*\*, 318/573; \*\*364/474.06\*\* [IMAGE AVAILABLE]

5. 5,402,354, Mar. 28, 1995, \*\*Control\*\* apparatus and \*\*control\*\* method for machine tools using fuzzy reasoning; Fumito Okino, et al., \*\*364/474.16\*\*, \*\*474.06\*\*, 395/904; \*\*451/5\*\* [IMAGE AVAILABLE]

22. 5,187,669, Feb. 16, 1993, Programmable surface sensor for machining rough stock; Douglas G. Wildes, et al., \*\*364/474.17\*\*, \*\*474.16\*\* [IMAGE AVAILABLE]

24. 5,165,205, Nov. 24, 1992, Device for vibrating materials to be ground; Takeo Nakagawa, et al., \*\*451/392\*\*, 366/108, 111; \*\*451/272\*\* [IMAGE AVAILABLE]

29. 5,113,728, May 19, 1992, Method and apparatus for forming intermittent chips when machining a rotating workpiece; Ludwik A. Medeksza, \*\*82/1.11\*\*, \*\*134\*\*, \*\*137\*\*, \*\*904\*\*, 408/1R, 17 [IMAGE AVAILABLE]

31. 5,101,599, Apr. 7, 1992, Ultrasonic machine having amplitude \*\*control\*\* unit; Hideki Takabayasi, et al., \*\*451/165\*\*, 83/701; 173/11; \*\*451/11\*\*, \*\*910\*\* [IMAGE AVAILABLE]

36. 5,050,468, Sep. 24, 1991, Method and apparatus for \*\*cutting\*\* a circumferential serpentine groove in a workpiece using an engine \*\*lathe\*\*; James D. Nydigger, \*\*82/1.11\*\*, \*\*18\*\*, \*\*118\*\*, \*\*134\*\*, \*\*364/474.02\*\* [IMAGE AVAILABLE]

48. 4,947,715, Aug. 14, 1990, Method and apparatus for \*\*cutting\*\* an aspheric surface on a workpiece; Buford W. Council, Jr., \*\*82/1.11\*\*, \*\*12\*\*, \*\*18\*\*, \*\*142\*\*, \*\*147\*\*, \*\*451/42\*\*, \*\*277\*\* [IMAGE AVAILABLE]

52. 4,911,044, Mar. 27, 1990, Ultrasonic vibration \*\*cutting\*\* device; Shoji Mishiro, et al., \*\*82/158\*\*, \*\*160\*\*, \*\*904\*\* [IMAGE AVAILABLE]

74. 4,693,146, Sep. 15, 1987, Method and apparatus for achieving chip separation while machining work pieces; Theodor Dombrowski, et al., \*\*82/118\*\*, \*\*11.5\*\*, \*\*104\*\*, \*\*137\*\*, \*\*904\*\* [IMAGE AVAILABLE]

111. 4,434,581, Mar. 6, 1984, Apparatus adapted for automatic or semi-automatic fabrication of ultra-precision ophthalmic lenses, e.g., contact lenses; Robert G. Spriggs, \*\*451/173\*\*, \*\*82/11\*\*, \*\*451/42\*\* [IMAGE AVAILABLE]

142. 4,114,486, Sep. 19, 1978, \*\*Lathe\*\* for generating spherical or aspherical surfaces on workpieces, method for generating aspherical surfaces on workpieces and workpiece having aspherical surface; Derrell C. Hooker, \*\*82/12\*\*, \*\*451/277\*\* [IMAGE AVAILABLE]

158. 3,898,767, Aug. 12, 1975, Automatic recipro-finish machine; Hisamine Kobayashi, \*\*451/113\*\*, \*\*11\*\*, \*\*334\*\* [IMAGE AVAILABLE]

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